

SEQUENCE LISTING

<110> Le Gal, Frederique Anne
 Guillet, Jean Gerard
 Gahery-Segard, Hanne
 Gras-Masse, Helene
 Melnyk, Oleg
 Tartar, Andre

<120> LIPOPEPTIDES INDUCING T LYMPHOCYTIC CYTOTOXICITY
 BEARING AT LEAST ONE AUXILIARY T EPITOPE, AND USES FOR
 VACCINATION

<130> 102.174

<140> 09/673,166

<141> 2001-04-04

<150> PCT/FR99/00792

<151> 1999-04-06

<160> 276

<170> PatentIn Ver. 2.1

<210> 1

<211> 14

<212> PRT

<213> Clostridium tetanus

<220>

<223> amino acids 830-843 of the tetanus toxin

<400> 1

Gln Tyr Ile Lys Ala Asn Ser Lys Phe Ile Gly Ile Thr Glu
 1 5 10

<210> 2

<211> 14

<212> PRT

<213> Human Papillomavirus (HPV)

<220>

<223> amino acids 43-57 of HPV E7 protein

<400> 2

Gly Gln Ala Glu Pro Asp Arg Ala His Asn Ile Val Thr Phe

1

5

10

<210> 3

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<221> LIPID

<222> (1)

<223> dipalmitoyl-lysyl chain on N-terminal residue

<400> 3

Ser Ser Gln Tyr Ile Lys Ala Asn Ser Lys Phe Ile Gly Ile Thr Glu

1

5

10

15

Ala Ala Ala Ala Ala Gly Ile Gly Ile Leu Thr Val

20

25

<210> 4

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<221> LIPID

<222> (1)

<223> dipalmitoyl-lysyl chain on N-terminal residue

<400> 4

Ser Ser Gln Tyr Ile Lys Ala Asn Ser Lys Phe Ile Gly Ile Thr Glu

1

5

10

15

Arg Gly Arg Ala Ala Gly Ile Gly Ile Leu Thr Val

20

25

<210> 5

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<221> LIPID

<222> (1)

<223> dipalmitoyl-lysyl chain on N-terminal residue

<400> 5

Gly Arg Gln Tyr Ile Lys Ala Asn Ser Lys Phe Ile Gly Ile Thr Glu
1 5 10 15

Arg Gly Arg Ala Ala Gly Ile Gly Ile Leu Thr Val
20 25

<210> 6

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<221> LIPID

<222> (1)

<223> monopalmitoyl-lysyl chain on N-terminal residue

<400> 6

Ser Ser Gln Tyr Ile Lys Ala Asn Ser Lys Phe Ile Gly Ile Thr Glu
1 5 10 15

Arg Gly Arg Ala Ala Gly Ile Gly Ile Leu Thr Val
20 25

<210> 7

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<221> LIPID

<222> (1)

<223> monopalmitoyl-lysyl chain on N-terminal residue

<400> 7

Gly Arg Gln Tyr Ile Lys Ala Asn Ser Lys Phe Ile Gly Ile Thr Glu
1 5 10 15

Arg Gly Arg Ala Ala Gly Ile Gly Ile Leu Thr Val
20 25

<210> 8

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> A hydrazine is bound between the N-terminal lysine
and isoleucine at position 2

<400> 8

Lys Ile Leu Lys Glu Pro Val His Gly Val
1 5 10

<210> 9

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> aldehyde group bound to N- terminal residue

<220>

<221> LIPID

<222> (15)

<223> palmitoyl chain on C-terminal lysine residue

<400> 9

Arg Thr Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu Lys
1 5 10 15

<210> 10

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 10

Glu Asp Ala Glu Leu Asn Pro Arg Phe
1 5

<210> 11

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 11

Ser Glu Leu Asp Leu Glu Lys Gly Leu

1

5

<210> 12

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 12

Asp Glu Leu Glu Ala Val Pro Asn Ile

1

5

<210> 13

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 13

Lys Glu Asp Ala Leu Gln Arg Pro Val

1

5

<210> 14

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 14

Glu Asp Ala Leu Gln Arg Pro Val Ala

1

5

<210> 15

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 15

Gly Glu Lys Leu Arg Val Leu Gly Tyr

1

5

<210> 16

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 16

Glu Asp Thr Met Glu Val Glu Glu Phe

1

5

<210> 17

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 17

Met Glu Tyr Leu Glu Lys Lys Asn Phe

1

5

<210> 18

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 18

Asn Glu Glu Ala Ala Asp Glu Val Phe

1

5

<210> 19

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 19

Val Asn Gln Glu Arg Phe Arg Met Ile

1

5

<210> 20

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 20

Leu Phe Gln Lys Leu Ala Ser Gln Leu

1

5

<210> 21

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 21

Ala Arg Lys Leu Arg His Val Phe Leu

1

5

<210> 22

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 22

Ala Leu Lys Ile Lys Ile Ser Gln Ile

1

5

<210> 23

<211> 8

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 23

Cys Val Lys Leu Gln Thr Val His

1

5

<210> 24

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 24

Lys Ala Leu Gln Arg Pro Val Ala Ser

1

5

<210> 25

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 25

Gly Ala Lys Thr Lys Ala Thr Ser Leu

1

5

<210> 26

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 26

Ile Gln Gln Met Arg Asn Lys Phe Ala

1

5

<210> 27

<211> 8

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 27

Gln Met Arg Asn Lys Phe Ala Phe

1

5

<210> 28

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic

myeloid leukemia translocation)

<400> 28

Asn Pro Arg Phe Leu Lys Asp Asn Leu

1

5

<210> 29

<211> 10

<212> PRT

<213> Homo sapiens

<220>

<400> 29

Thr Pro Asp Cys Ser Ser Asn Glu Asn Leu

1

5

10

<210> 30

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 30

Thr Pro Arg Arg Gln Ser Met Thr Val

1

5

<210> 31

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 31

Ser Pro Gly Gln Arg Ser Ile Ser Leu

1

5

<210> 32

<211> 10
 <212> PRT
 <213> Homo sapiens

 <220>
 <223> epitope from BCR-ABL fusion protein (chronic
 myeloid leukemia translocation)

 <400> 32
 His Pro Asn Leu Val Gln Leu Leu Gly Val
 1 5 10

<210> 33
 <211> 10
 <212> PRT
 <213> Homo sapiens

<220>
 <223> epitope from BCR-ABL fusion protein (chronic
 myeloid leukemia translocation)

 <400> 33
 Ser Pro Lys Pro Ser Asn Gly Ala Gly Val
 1 5 10

<210> 34
 <211> 9
 <212> PRT
 <213> Homo sapiens

<220>
 <223> epitope from BCR-ABL fusion protein (chronic
 myeloid leukemia translocation)

<400> 34
 Lys Pro Leu Arg Arg Gln Val Thr Val
 1 5

<210> 35
 <211> 9
 <212> PRT
 <213> Homo sapiens

<220>
 <223> epitope from BCR-ABL fusion protein (chronic

myeloid leukemia translocation)

<400> 35

Ser Pro Ala Pro Val Pro Ser Thr Leu

1

5

<210> 36

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 36

Glu Arg Cys Lys Ala Ser Ile Arg Arg

1

5

<210> 37

<211> 10

<212> PRT

<213> Homo sapiens

<220>

<400> 37

Asp Arg Gln Arg Trp Gly Phe Phe Arg Arg

1

5

10

<210> 38

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 38

Gln Arg Val Gly Asp Leu Phe Gln Lys

1

5

<210> 39

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 39

Phe Arg Val His Ser Arg Asn Gly Lys

1

5

<210> 40

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 40

Leu Leu Tyr Lys Pro Val Asp Arg Val

1

5

<210> 41

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 41

Phe Leu Ser Ser Ile Asn Glu Glu Ile

1

5

<210> 42

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic

myeloid leukemia translocation)

<400> 42

Gln Leu Leu Lys Asp Ser Phe Met Val

1

5

<210> 43

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 43

Phe Met Val Glu Leu Val Glu Gly Ala

1

5

<210> 44

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 44

Lys Leu Ser Glu Gln Glu Ser Leu Leu

1

5

<210> 45

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 45

Met Leu Thr Asn Ser Cys Val Lys Leu

1

5

<210> 46
<211> 10
<212> PRT
<213> Homo sapiens

<220>
<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 46
Gly Leu Tyr Gly Phe Leu Asn Val Ile Val
1 5 10

<210> 47
<211> 9
<212> PRT
<213> Homo sapiens

<220>

<220>
<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 47
Phe Leu Asn Val Ile Val His Ser Ala
1 5

<210> 48
<211> 9
<212> PRT
<213> Homo sapiens

<220>
<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 48
Val Leu Leu Tyr Met Ala Thr Gln Ile
1 5

<210> 49
<211> 9
<212> PRT

<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 49

Phe Ile Pro Leu Ile Ser Thr Arg Val

1

5

<210> 50

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 50

Val Val Leu Asp Ser Thr Glu Ala Leu

1

5

<210> 51

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 51

Asn Gln Glu Arg Phe Arg Met Ile Tyr

1

5

<210> 52

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic

myeloid leukemia translocation)

<400> 52

Val Gly Asp Ala Ser Arg Pro Pro Tyr

1

5

<210> 53

<211> 10

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 53

Lys Val Pro Glu Leu Tyr Glu Ile His Lys

1

5

10

<210> 54

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 54

Lys Leu Ala Ser Gln Leu Gly Val Tyr

1

5

<210> 55

<211> 10

<212> PRT

<213> Homo sapiens

<220>

<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 55

Met Val Glu Leu Val Glu Gly Ala Arg Lys
1 5 10

<210> 56

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 56

Ile Val His Ser Ala Thr Gly Phe Lys
1 5

<210> 57

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 57

Ala Thr Gly Phe Lys Gln Ser Ser Lys
1 5

<210> 58

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 58

Lys Gln Ser Ser Lys Ala Leu Gln Arg
1 5

<210> 59
<211> 10
<212> PRT
<213> Homo sapiens

<220>
<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 59
Glu Val Tyr Glu Gly Val Trp Lys Lys Tyr
1 5 10

<210> 60
<211> 10
<212> PRT
<213> Homo sapiens

<220>
<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 60
Ser Leu Ala Tyr Asn Lys Phe Ser Ile Lys
1 5 10

<210> 61
<211> 9
<212> PRT
<213> Homo sapiens

<220>

<220>
<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 61
Asn Leu Phe Ser Ala Leu Ile Lys Lys
1 5

<210> 62
<211> 11
<212> PRT

<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 62

Thr Val Ala Pro Ala Ser Gly Leu Pro His Lys

1

5

10

<210> 63

<211> 10

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 63

Leu Ile Ser Thr Arg Val Ser Leu Arg Lys

1

5

10

<210> 64

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from BCR-ABL fusion protein (chronic
myeloid leukemia translocation)

<400> 64

Arg Ile Ala Ser Gly Ala Ile Thr Lys

1

5

<210> 65

<211> 11

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from p53 protein

<400> 65

Arg Val Glu Gly Asn Leu Ala Arg Val Glu Tyr
1 5 10

<210> 66
<211> 9
<212> PRT
<213> Homo sapiens

<220>
<223> epitope from p53 protein

<400> 66
Gly Ser Asp Cys Thr Thr Ile His Tyr
1 5

<210> 67
<211> 11
<212> PRT
<213> Homo sapiens

<220>
<223> epitope from p53 protein

<400> 67
Leu Leu Pro Glu Asn Asn Val Leu Ser Pro Leu
1 5 10

<210> 68
<211> 9
<212> PRT
<213> Homo sapiens

<220>
<223> epitope from p53 protein

<400> 68
Arg Met Pro Glu Ala Ala Pro Pro Val
1 5

<210> 69
<211> 9
<212> PRT
<213> Homo sapiens

<220>

<223> epitope from p53 protein

<400> 69

Arg Met Pro Glu Ala Ala Pro Arg Val

1

5

<210> 70

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from p53 protein

<400> 70

Ala Leu Asn Lys Met Phe Cys Gln Leu

1

5

<210> 71

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from p53 protein

<400> 71

Ser Thr Pro Pro Pro Gly Thr Arg Val

1

5

<210> 72

<211> 11

<212> PRT

<213> Homo sapiens

<220>

<220>

<223> epitope from p53 protein

<400> 72

Gly Leu Ala Pro Pro Gln His Leu Ile Arg Val

1

5

10

<210> 73
<211> 9
<212> PRT
<213> Homo sapiens

<220>
<223> epitope from p53 protein

<400> 73
Leu Leu Gly Arg Asn Ser Phe Glu Val
1 5

<210> 74
<211> 9
<212> PRT
<213> Homo sapiens

<220>
<223> epitope from p53 protein

<400> 74
Pro Leu Asp Gly Glu Tyr Phe Thr Leu
1 5

<210> 75
<211> 9
<212> PRT
<213> Homo sapiens

<220>
<223> epitope from p53 protein

<400> 75
Arg Val Arg Ala Met Ala Ile Tyr Lys
1 5

<210> 76
<211> 9
<212> PRT
<213> Homo sapiens

<220>
<223> epitope from p53 protein

<400> 76

Arg Arg Thr Glu Glu Glu Asn Leu Arg

1

5

<210> 77

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from p53 protein

<400> 77

Glu Leu Pro Pro Gly Ser Thr Lys Arg

1

5

<210> 78

<211> 10

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from p53 protein

<400> 78

Leu Pro Glu Asn Asn Val Leu Ser Pro Leu

1

5

10

<210> 79

<211> 11

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from p53 protein

<400> 79

Ala Pro Arg Met Pro Glu Ala Ala Pro Pro Val

1

5

10

<210> 80

<211> 11

<212> PRT

<213> Homo sapiens

<220>

<220>

<223> epitope from p53 protein

<400> 80

Ala Pro Arg Met Pro Glu Ala Ala Pro Arg Val

1

5

10

<210> 81

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from p53 protein

<400> 81

Ala Pro Pro Gln His Leu Ile Arg Val

1

5

<210> 82

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from p53 protein

<400> 82

Arg Pro Ile Leu Thr Ile Ile Thr Leu

1

5

<210> 83

<211> 10

<212> PRT

<213> Homo sapiens

<220>

<220>

<223> epitope from p53 protein

<400> 83

Lys Pro Leu Asp Gly Glu Tyr Phe Thr Leu
1 5 10

<210> 84

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from p53 protein

<400> 84

Cys Gln Leu Ala Lys Thr Cys Pro Val
1 5

<210> 85

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from p53 protein

<400> 85

Gly Leu Ala Pro Pro Gln His Leu Ile
1 5

<210> 86

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from p53 protein

<400> 86

Asn Thr Phe Arg His Ser Val Val Val
1 5

<210> 87

<211> 11

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from p53 protein

<400> 87

Leu Leu Pro Glu Asn Asn Val Leu Ser Pro Leu
1 5 10

<210> 88

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from p53 protein

<400> 88

Arg Met Pro Glu Ala Ala Pro Pro Val
1 5

<210> 89

<211> 10

<212> PRT

<213> Homo sapiens

<220>

<223> epitope from p53 protein

<400> 89

Leu Ile Arg Val Glu Gly Asn Leu Arg Val
1 5 10

<210> 90

<211> 10

<212> PRT

<213> Human Papillomavirus (HPV)

<220>

<223> HPV epitope

<400> 90

Tyr Met Leu Asp Leu Gln Pro Glu Thr Thr
1 5 10

<210> 91

<211> 9
 <212> PRT
 <213> Human Papillomavirus (HPV)

 <220>
 <223> HPV epitope

 <400> 91
 Leu Leu Met Gly Thr Leu Gly Ile Val
 1 5

<210> 92
 <211> 8
 <212> PRT
 <213> Human Papillomavirus (HPV)

 <220>
 <223> HPV epitope

<400> 92
 Thr Leu Gly Ile Val Cys Pro Ile
 1 5

<210> 93
 <211> 10
 <212> PRT
 <213> Human Papillomavirus (HPV)

 <220>
 <223> HPV epitope

<400> 93
 Thr Ile His Asp Ile Ile Leu Glu Cys Val
 1 5 10

<210> 94
 <211> 9
 <212> PRT
 <213> Human Papillomavirus (HPV)

 <220>
 <223> HPV epitope

<400> 94
 Lys Leu Pro Gln Leu Cys Thr Glu Leu

1

5

<210> 95

<211> 8

<212> PRT

<213> Human Papillomavirus (HPV)

<220>

<223> HPV epitope

<400> 95

Arg Pro Pro Lys Leu Pro Gln Leu

1

5

<210> 96

<211> 23

<212> PRT

<213> Human Papillomavirus (HPV)

<220>

<223> HPV epitope

<400> 96

Leu Arg Arg Glu Val Tyr Asp Phe Ala Phe Arg Asp Leu Cys Ile Val

1

5

10

15

Tyr Arg Asp Gly Asn Pro Tyr

20

<210> 97

<211> 9

<212> PRT

<213> Human Papillomavirus (HPV)

<220>

<223> HPV epitope

<400> 97

Ile Ser Glu Tyr Arg His Tyr Cys Tyr

1

5

<210> 98

<211> 20

<212> PRT

<213> Human Papillomavirus (HPV)

<220>

<223> HPV epitope

<400> 98

Glu Lys Gln Arg His Leu Asp Lys Lys Gln Arg Phe His Asn Ile Arg
1 5 10 15

Gly Arg Trp Thr
20

<210> 99

<211> 15

<212> PRT

<213> Human Papillomavirus (HPV)

<220>

<223> HPV epitope

<400> 99

Gly Gln Ala Glu Pro Asp Arg Ala His Tyr Asn Ile Val Thr Phe
1 5 10 15

<210> 100

<211> 9

<212> PRT

<213> Human Papillomavirus (HPV)

<220>

<223> HPV epitope

<400> 100

Gln Ala Glu Pro Asp Arg Ala His Tyr
1 5

<210> 101

<211> 10

<212> PRT

<213> Human Papillomavirus (HPV)

<220>

<223> HPV epitope

<400> 101

Glu Pro Asp Arg Ala His Tyr Asn Ile Val
1 5 10

<210> 102
<211> 11
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 epitope

<400> 102
Gly Leu Glu Gly Leu Ile His Ser Gln Arg Arg
1 5 10

<210> 103
<211> 8
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 epitope

<400> 103
Phe Pro Asp Trp Gln Asn Tyr Thr
1 5

<210> 104
<211> 9
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 104
Leu Thr Phe Gly Trp Cys Tyr Lys Leu
1 5

<210> 105
<211> 8
<212> PRT
<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 105

Arg Phe Asp Ser Arg Leu Ala Phe

1

5

<210> 106

<211> 8

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 106

Ala Arg Glu Leu His Pro Glu Tyr

1

5

<210> 107

<211> 9

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 107

Lys Leu Thr Pro Leu Cys Val Thr Leu

1

5

<210> 108

<211> 9

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 108

Ser Leu Tyr Asn Thr Val Ala Thr Leu

1

5

<210> 109

<211> 9
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 109
Ala Leu Val Glu Ile Cys Thr Glu Met
1 5

<210> 110
<211> 11
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 110
Val Leu Asp Val Gly Asp Ala Tyr Phe Ser Val
1 5 10

<210> 111
<211> 9
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 111
Lys Ile Tyr Gln Tyr Met Asp Asp Leu
1 5

<210> 112
<211> 9
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 112
Lys Ile Glu Glu Leu Arg Gln His Leu

1

5

<210> 113

<211> 11

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 113

Leu Leu Arg Trp Gly Leu Thr Thr Pro Asp Lys

1

5

10

<210> 114

<211> 9

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 114

Ile Leu Lys Glu Pro Val His Gly Val

1

5

<210> 115

<211> 9

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 115

Pro Leu Val Lys Leu Trp Tyr Gln Leu

1

5

<210> 116

<211> 9

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 116

Glu Leu Val Asn Gln Asp Glu Gln Leu

1

5

<210> 117

<211> 10

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 117

Pro Leu Thr Phe Gly Trp Cys Phe Lys Leu

1

5

10

<210> 118

<211> 10

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 118

Val Leu Gln Trp Arg Phe Asp Ser Arg Leu

1

5

10

<210> 119

<211> 9

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 119

Ala Leu His His Val Ala Arg Glu Leu

1

5

<210> 120

<211> 9

<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 Epitope

<400> 120
Ser Leu Leu Asn Ala Thr Val Asp Ile
1 5

<210> 121
<211> 9
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 121
Asp Leu Asn Thr Met Leu Asn Thr Val
1 5

<210> 122
<211> 9
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 122
Val Ile Tyr Gln Tyr Met Asp Asp Leu
1 5

<210> 123
<211> 9
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 123
Pro Leu Val Lys Leu Trp Tyr Gln Leu
1 5

<210> 124
<211> 10
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 124
Val Leu Val Gly Pro Thr Pro Val Asn Ile
1 5 10

<210> 125
<211> 8
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 125
Thr Val Tyr Tyr Gly Val Pro Val
1 5

<210> 126
<211> 8
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 126
Ser Leu Lys Pro Cys Val Lys Leu
1 5

<210> 127
<211> 9
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 127

Arg Ile Gln Arg Gly Pro Gly Arg Ala

1

5

<210> 128

<211> 9

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 128

Thr Leu Thr Ser Cys Asn Thr Ser Val

1

5

<210> 129

<211> 8

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 129

Phe Ile Asn Met Trp Gln Glu Val

1

5

<210> 130

<211> 9

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 130

Val Val Gln Gly Ala Tyr Arg Ala Ile

1

5

<210> 131

<211> 10

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 131

His Ala Gly Pro Ile Ala Pro Gly Gln Met

1 5 10

<210> 132

<211> 10

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 132

Gln Met Lys Asp Cys Thr Glu Arg Gln Ala

1 5 10

<210> 133

<211> 9

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 133

Phe Leu Gln Ser Arg Pro Glu Thr Ala

1 5

<210> 134

<211> 11

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 134

Glu Ser Glu Leu Val Asn Gln Ile Ile Glu Gly

1 5 10

<210> 135
<211> 9
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 135
Lys Ile Arg Leu Arg Pro Gly Gly Lys
1 5

<210> 136
<211> 9
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 136
Arg Leu Arg Pro Gly Gly Lys Lys Lys
1 5

<210> 137
<211> 11
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 137
Ala Leu Val Glu Ile Cys Thr Glu Met Glu Lys
1 5 10

<210> 138
<211> 9
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 138

Ala Ile Phe Gln Ser Ser Met Thr Lys

1

5

<210> 139

<211> 10

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 139

Asp Leu Glu Ile Gly Gln His Arg Thr Lys

1

5

10

<210> 140

<211> 10

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 140

Gln Val Pro Leu Arg Pro Met Thr Tyr Lys

1

5

10

<210> 141

<211> 10

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 141

Thr Val Tyr Tyr Gly Val Pro Val Trp Lys

1

5

10

<210> 142

<211> 11

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 142

Arg Leu Arg Asp Leu Leu Leu Ile Val Thr Arg

1

5

10

<210> 143

<211> 9

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 143

Lys Ile Arg Leu Arg Pro Gly Gly Lys

1

5

<210> 144

<211> 9

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 144

Ala Ile Phe Gln Ser Ser Met Thr Lys

1

5

<210> 145

<211> 11

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 145

Gln Ile Tyr Gln Glu Pro Phe Lys Asn Leu Lys

1

5

10

<210> 146
<211> 10
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 146
Gln Val Pro Leu Arg Pro Met Thr Tyr Lys
1 5 10

<210> 147
<211> 9
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 147
Ala Val Asp Leu Ser His Phe Leu Lys
1 5

<210> 148
<211> 10
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 148
Ala Cys Gln Val Gly Gly Pro Gly His Lys
1 5 10

<210> 149
<211> 9
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 149

Ala Thr Leu Tyr Cys Val His Gln Arg

1

5

<210> 150

<211> 10

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 150

Leu Phe Cys Ala Ser Asp Ala Lys Ala Tyr

1

5

10

<210> 151

<211> 8

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 151

Tyr Leu Lys Asp Gln Gln Leu Leu

1

5

<210> 152

<211> 9

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 152

Arg Tyr Leu Lys Asp Gln Gln Leu Leu

1

5

<210> 153

<211> 9

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 153

Val Tyr Tyr Asp Pro Ser Lys Asp Leu

1

5

<210> 154

<211> 9

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 154

Ile Tyr Gln Glu Pro Phe Lys Asn Leu

1

5

<210> 155

<211> 11

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 155

Glu Ser Glu Leu Val Asn Gln Ile Ile Glu Gly

1

5

10

<210> 156

<211> 10

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 156

Glu Thr Ile Asn Glu Glu Ala Ala Glu Trp

1

5

10

<210> 157

<211> 9
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 157
Glu Val Ile Pro Met Phe Ser Ala Leu
1 5

<210> 158
<211> 9
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 158
Arg Ala Ile Arg His Ile Pro Arg Arg
1 5

<210> 159
<211> 11
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 159
Arg Leu Arg Asp Leu Leu Leu Ile Val Thr Arg
1 5 10

<210> 160
<211> 9
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 160
Arg Ile Lys Gln Ile Ile Asn Met Trp

1

5

<210> 161

<211> 9

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 161

His Arg Leu Arg Asp Leu Leu Leu Ile

1

5

<210> 162

<211> 10

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 162

Pro Ile Gln Lys Glu Thr Trp Glu Thr Trp

1

5

10

<210> 163

<211> 10

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 163

Ile Ile Leu Gly Leu Asn Lys Ile Val Arg

1

5

10

<210> 164

<211> 9

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 164

Tyr Leu Ala Trp Val Pro Ala His Lys
1 5

<210> 165

<211> 9

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 165

Phe Pro Val Thr Gln Val Pro Leu Arg
1 5

<210> 166

<211> 10

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 166

Thr Pro Gly Pro Gly Val Arg Tyr Pro Leu
1 5 10

<210> 167

<211> 10

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 167

Arg Pro Asn Asn Asn Thr Arg Lys Ser Ile
1 5 10

<210> 168

<211> 9

<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 168
Ile Pro Arg Arg Ile Arg Gln Gly Leu
1 5

<210> 169
<211> 9
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 169
Tyr Leu Ala Trp Val Pro Ala His Lys
1 5

<210> 170
<211> 9
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 170
Arg Val Lys Glu Lys Tyr Gln His Leu
1 5

<210> 171
<211> 9
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 171
Gly Gly Lys Lys Lys Tyr Lys Leu Lys
1 5

<210> 172
<211> 8
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 172
Phe Leu Lys Glu Lys Gly Gly Leu
1 5

<210> 173
<211> 9
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 173
Gly Glu Ile Tyr Lys Arg Trp Ile Ile
1 5

<210> 174
<211> 8
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 174
Tyr Leu Lys Asp Gln Gln Leu Leu
1 5

<210> 175
<211> 8
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 175

Pro Arg Arg Ile Arg Gln Gly Leu

1

5

<210> 176

<211> 10

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 176

Arg Ile Arg Gln Gly Leu Glu Arg Ile Leu

1

5

10

<210> 177

<211> 9

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 177

Asp Cys Lys Thr Ile Leu Lys Ala Leu

1

5

<210> 178

<211> 9

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 178

Gly Pro Lys Val Lys Gln Trp Pro Leu

1

5

<210> 179

<211> 8

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 179

Glu Trp Arg Phe Asp Ser Arg Leu

1

5

<210> 180

<211> 9

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 180

Glu Arg Tyr Leu Lys Asp Gln Gln Leu

1

5

<210> 181

<211> 9

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 181

Asp Arg Phe Tyr Lys Thr Leu Arg Ala

1

5

<210> 182

<211> 9

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 182

Asp Leu Asn Thr Met Leu Asn Thr Val

1

5

<210> 183
<211> 11
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 183
Leu Arg Ala Glu Gln Ala Ser Val Gln Glu Val
1 5 10

<210> 184
<211> 10
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 184
Arg Ala Glu Gln Ala Ser Val Gln Glu Val
1 5 10

<210> 185
<211> 9
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 185
Tyr Pro Leu Thr Phe Gly Trp Cys Tyr
1 5

<210> 186
<211> 9
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 186

Tyr Pro Leu Thr Phe Gly Trp Cys Phe

1

5

<210> 187

<211> 10

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 187

Lys Arg Trp Ile Ile Leu Gly Leu Asn Lys

1

5

10

<210> 188

<211> 10

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 188

Gln Val Pro Leu Arg Pro Met Thr Tyr Lys

1

5

10

<210> 189

<211> 8

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 189

Arg Tyr Pro Leu Thr Phe Gly Trp

1

5

<210> 190

<211> 7

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 190

Tyr Pro Leu Thr Phe Gly Trp

1

5

<210> 191

<211> 9

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 191

Glu Arg Tyr Leu Lys Asp Gln Gln Leu

1

5

<210> 192

<211> 10

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 192

Gly Arg Arg Gly Trp Glu Ala Leu Lys Tyr

1

5

10

<210> 193

<211> 9

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 193

Asp Pro Asn Pro Gln Glu Val Val Leu

1

5

<210> 194
<211> 9
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 194
Arg Pro Val Val Ser Thr Gln Leu Leu
1 5

<210> 195
<211> 10
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 195
Val Pro Leu Asp Lys Asp Phe Arg Lys Tyr
1 5 10

<210> 196
<211> 9
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 196
Ser Pro Ala Ile Phe Gln Ser Ser Met
1 5

<210> 197
<211> 9
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 197

Asn Pro Asp Ile Val Ile Tyr Gln Tyr

1

5

<210> 198

<211> 9

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 198

Ile Pro Leu Thr Glu Glu Ala Glu Leu

1

5

<210> 199

<211> 10

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 199

Glu Pro Ile Val Gly Ala Glu Thr Phe Tyr

1

5

10

<210> 200

<211> 9

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 200

Phe Pro Val Arg Pro Gln Val Pro Leu

1

5

<210> 201

<211> 8

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 201

Val Pro Leu Arg Pro Met Thr Tyr

1

5

<210> 202

<211> 9

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 202

Thr Ala Val Pro Trp Asn Ala Ser Trp

1

5

<210> 203

<211> 11

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 203

Val Pro Val Trp Lys Glu Ala Thr Thr Thr Leu

1

5

10

<210> 204

<211> 9

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 204

Asn Ser Ser Gln Val Ser Gln Asn Tyr

1

5

<210> 205

<211> 9
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 205
Pro Pro Ile Pro Val Gly Glu Ile Tyr
1 5

<210> 206
<211> 9
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 206
Tyr Phe Pro Asp Trp Gln Asn Tyr Thr
1 5

<210> 207
<211> 9
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 207
Ser Glu Gly Ala Thr Pro Gln Asp Leu
1 5

<210> 208
<211> 10
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 208
Leu Glu Ser Gly Ala Thr Pro Gln Asp Leu

1

5

10

<210> 209

<211> 9

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 209

Arg Ala Ile Glu Ala Gln Gln His Leu

1

5

<210> 210

<211> 9

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 210

Ala Leu Val Glu Ile Cys Thr Glu Met

1

5

<210> 211

<211> 9

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 211

Glu Lys Glu Gly Lys Ile Ser Lys Ile

1

5

<210> 212

<211> 8

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 212

Thr Ala Phe Thr Ile Pro Ser Ile

1

5

<210> 213

<211> 9

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 213

Ala Phe His His Val Ala Arg Glu Leu

1

5

<210> 214

<211> 11

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 214

Val Pro Val Trp Lys Glu Ala Thr Thr Thr Leu

1

5

10

<210> 215

<211> 10

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 215

Thr Ser Leu Thr Gln Glu Gln Ile Gly Trp

1

5

10

<210> 216

<211> 10

<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 216
His Thr Gln Gly Tyr Phe Pro Asp Trp Gln
1 5 10

<210> 217
<211> 9
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 217
His Thr Gln Gly Tyr Phe Pro Asp Trp
1 5

<210> 218
<211> 7
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 218
Tyr Phe Pro Asp Trp Gln Asn
1 5

<210> 219
<211> 9
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 219
Ile Ser Pro Arg Thr Leu Asn Ala Trp
1 5

<210> 220
<211> 9
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 220
Phe Ser Pro Glu Val Ile Pro Met Phe
1 5

<210> 221
<211> 10
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 221
Arg Leu Arg Pro Gly Gly Lys Lys Lys Tyr
1 5 10

<210> 222
<211> 10
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 222
Leu Gly Leu Asn Lys Ile Val Arg Met Tyr
1 5 10

<210> 223
<211> 12
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 EPITOPE

<400> 223

Leu Val Gly Lys Leu Asn Trp Ala Ser Gln Ile Tyr

1

5

10

<210> 224

<211> 8

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 224

Ala Val Asp Leu Ser His Phe Leu

1

5

<210> 225

<211> 11

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 225

Thr Gln Gly Tyr Phe Pro Asp Trp Gln Asn Tyr

1

5

10

<210> 226

<211> 9

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 226

Ser Phe Asn Cys Gly Gly Glu Phe Phe

1

5

<210> 227

<211> 10

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 227

Val Thr Asp Ser Gln Tyr Ala Leu Gly Ile

1 5 10

<210> 228

<211> 9

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 228

Arg Ala Glu Gln Ala Ser Gln Glu Val

1 5

<210> 229

<211> 10

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 229

Lys Ala Ala Leu Asp Leu Ser His Pro Leu

1 5 10

<210> 230

<211> 9

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 EPITOPE

<400> 230

Gln Ala Thr Gln Glu Val Lys Asn Trp

1 5

<210> 231
<211> 9
<212> PRT
<213> Homo sapiens

<220>
<223> HUMAN MELANOMA EPITOPE

<400> 231
Met Leu Leu Ala Val Leu Tyr Cys Leu
1 5

<210> 232
<211> 9
<212> PRT
<213> Homo sapiens

<220>
<223> HUMAN MELANOMA EPITOPE

<400> 232
Tyr Met Asn Gly Thr Met Ser Gln Val
1 5

<210> 233
<211> 9
<212> PRT
<213> Homo sapiens

<220>
<223> HUMAN MELANOMA EPITOPE

<400> 233
Tyr Met Asp Gly Thr Met Ser Gln Val
1 5

<210> 234
<211> 9
<212> PRT
<213> Homo sapiens

<220>
<223> HUMAN MELANOMA EPITOPE

<400> 234

Ala Phe Leu Pro Trp His Arg Leu Phe

1

5

<210> 235

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> HUMAN MELANOMA EPITOPE

<400> 235

Ser Glu Ile Trp Arg Asp Ile Asp Phe

1

5

<210> 236

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> HUMAN MELANOMA EPITOPE

<400> 236

Lys Thr Trp Gly Gln Tyr Trp Gln Val

1

5

<210> 237

<211> 10

<212> PRT

<213> Homo sapiens

<220>

<223> HUMAN MELANOMA EPITOPE

<400> 237

Ala Met Leu Gly Thr His Thr Met Glu Val

1

5

10

<210> 238

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> HUMAN MELANOMA EPITOPE

<400> 238

Met Leu Gly Thr His Thr Met Glu Val

1

5

<210> 239

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> HUMAN MELANOMA EPITOPE

<400> 239

Ile Thr Asp Gln Val Pro Phe Ser Val

1

5

<210> 240

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> HUMAN MELANOMA EPITOPE

<400> 240

Tyr Leu Glu Pro Gly Pro Val Thr Ala

1

5

<210> 241

<211> 10

<212> PRT

<213> Homo sapiens

<220>

<223> HUMAN MELANOMA EPITOPE

<400> 241

Leu Leu Asp Gly Thr Ala Thr Leu Arg Leu

1

5

10

<210> 242
<211> 10
<212> PRT
<213> Homo sapiens

<220>
<223> HUMAN MELANOMA EPITOPE

<400> 242
Val Leu Tyr Arg Tyr Gly Ser Phe Ser Val
1 5 10

<210> 243
<211> 10
<212> PRT
<213> Homo sapiens

<220>
<223> HUMAN MELANOMA EPITOPE

<400> 243
Ser Leu Ala Asp Thr Asn Ser Leu Ala Val
1 5 10

<210> 244
<211> 9
<212> PRT
<213> Homo sapiens

<220>
<223> HUMAN MELANOMA EPITOPE

<400> 244
Ala Leu Leu Ala Val Gly Ala Thr Lys
1 5

<210> 245
<211> 10
<212> PRT
<213> Homo sapiens

<220>
<223> HUMAN MELANOMA EPITOPE

<400> 245

Glu Ala Ala Gly Ile Gly Ile Leu Thr Val
1 5 10

<210> 246
<211> 9
<212> PRT
<213> Homo sapiens

<220>
<223> HUMAN MELANOMA EPITOPE

<400> 246
Ile Leu Thr Val Ile Leu Gly Val Leu
1 5

<210> 247
<211> 9
<212> PRT
<213> Homo sapiens

<220>
<223> HUMAN MELANOMA EPITOPE

<400> 247
Met Ser Leu Gln Arg Gln Phe Leu Arg
1 5

<210> 248
<211> 9
<212> PRT
<213> Homo sapiens

<220>
<223> HUMAN MELANOMA EPITOPE

<400> 248
Leu Leu Gly Pro Gly Arg Pro Tyr Arg
1 5

<210> 249
<211> 9
<212> PRT
<213> Homo sapiens

<220>

<223> TUMOR EPITOPE

<400> 249

Glu Glu Lys Leu Ile Val Val Leu Phe

1

5

<210> 250

<211> 10

<212> PRT

<213> Homo sapiens

<220>

<223> TUMOR EPITOPE

<400> 250

Ala Cys Asp Pro His Ser Gly His Phe Val

1

5

10

<210> 251

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> TUMOR EPITOPE

<400> 251

Ser Tyr Leu Asp Ser Gly Ile His Phe

1

5

<210> 252

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> TUMOR EPITOPE

<400> 252

Phe Pro Ser Asp Ser Trp Cys Tyr Phe

1

5

<210> 253

<211> 9
<212> PRT
<213> Homo sapiens

<220>
<223> TUMOR EPITOPE

<400> 253
Glu Ala Asp Pro Thr Gly His Ser Tyr
1 5

<210> 254
<211> 9
<212> PRT
<213> Homo sapiens

<220>
<223> TUMORE EPITOPE

<400> 254
Ser Ala Tyr Gly Glu Pro Arg Lys Leu
1 5

<210> 255
<211> 9
<212> PRT
<213> Homo sapiens

<220>
<223> TUMOR EPITOPE

<400> 255
Glu Val Asp Pro Ile Gly His Leu Tyr
1 5

<210> 256
<211> 9
<212> PRT
<213> Homo sapiens

<220>
<223> TUMOR EPITOPE

<400> 256
Phe Leu Trp Gly Pro Arg Ala Leu Val

1

5

<210> 257

<211> 10

<212> PRT

<213> Homo sapiens

<220>

<223> TUMOR EPITOPE

<400> 257

Met Glu Val Asp Pro Ile Gly His Leu Tyr

1

5

10

<210> 258

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> TUMOR EPITOPE

<400> 258

Ala Ala Arg Ala Val Phe Leu Ala Leu

1

5

<210> 259

<211> 8

<212> PRT

<213> Homo sapiens

<220>

<223> TUMOR EPITOPE

<400> 259

Tyr Arg Pro Arg Pro Arg Arg Tyr

1

5

<210> 260

<211> 10

<212> PRT

<213> Homo sapiens

<220>

<223> TUMOR EPITOPE

<400> 260

Ser Pro Ser Ser Asn Arg Ile Arg Asn Thr
1 5 10

<210> 261

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<223> TUMOR EPITOPE

<400> 261

Val Leu Pro Asp Val Phe Ile Arg Cys
1 5

<210> 262

<211> 9

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 PEPTIDE

<400> 262

Ser Leu Tyr Asn Thr Val Ala Thr Leu
1 5

<210> 263

<211> 9

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 PEPTIDE

<400> 263

Ile Leu Lys Glu Pro Val His Gly Val
1 5

<210> 264

<211> 9

<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 PEPTIDE

<400> 264
Val Ile Tyr Gln Tyr Met Asp Asp Leu
1 5

<210> 265
<211> 9
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 PEPTIDE

<400> 265
Asn Pro Asp Ile Val Ile Tyr Gln Tyr
1 5

<210> 266
<211> 8
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 PEPTIDE

<400> 266
Pro Asp Ile Val Ile Tyr Gln Tyr
1 5

<210> 267
<211> 8
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 PEPTIDE

<400> 267
Phe Tyr Gln Tyr Met Asp Asp Leu
1 5

<210> 268
<211> 10
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 PEPTIDE

<400> 268
Ile Val Ile Tyr Gln Tyr Met Asp Asp Leu
1 5 10

<210> 269
<211> 9
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 PEPTIDE

<400> 269
Phe Pro Val Thr Pro Gln Val Pro Leu
1 5

<210> 270
<211> 9
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 PEPTIDE

<400> 270
Thr Pro Gln Val Pro Leu Arg Pro Met
1 5

<210> 271
<211> 8
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<223> HIV-1 PEPTIDE

<400> 271

Val Pro Leu Arg Pro Met Thr Tyr

1

5

<210> 272

<211> 10

<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<223> HIV-1 PEPTIDE

<400> 272

Gln Val Pro Leu Arg Pro Met Thr Tyr Lys

1

5

10

<210> 273

<211> 28

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<221> LIPID

<222> (1)

<223> PALMITOYL-LYSYL CHAIN ON N-TERMINAL RESIDUE; HIV-1
LIPOPEPTIDE

<400> 273

Gly Arg Gln Tyr Ile Lys Ala Asn Ser Lys Phe Ile Gly Ile Thr Glu

1

5

10

15

Arg Gly Arg Ser Leu Tyr Asn Thr Val Ala Thr Leu

20

25

<210> 274

<211> 28

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<221> LIPID

<222> (1)

<223> PALMITOYL-LYSYL CHAIN ON N-TERMINAL RESIDUE; HIV-1
LIPOPEPTIDE

<400> 274

Gly Arg Gln Tyr Ile Lys Ala Asn Ser Lys Phe Ile Gly Ile Thr Glu
1 5 10 15

Arg Gly Arg Ile Leu Lys Glu Pro Val His Gly Val
20 25

<210> 275

<211> 32

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<221> LIPID

<222> (1)

<223> PALMITOYL-LYSYL CHAIN ON N-TERMINAL RESIDUE; HIV-1
LIPOPEPTIDE

<400> 275

Gly Arg Gln Tyr Ile Lys Ala Asn Ser Lys Phe Ile Gly Ile Thr Glu
1 5 10 15

Arg Gly Arg Asn Pro Asp Ile Val Ile Tyr Gln Tyr Met Asp Asp Leu
20 25 30

<210> 276

<211> 34

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<221> LIPID

<222> () ..)

<223> PALMITOYL-LYSYL CHAIN ON N-TERMINAL RESIDUE; HIV-1
LIPOPEPTIDE

<400> 276

Gly Arg Gln Tyr Ile Lys Ala Asn Ser Lys Phe Ile Gly Ile Thr Glu
1 5 10 15

Arg Gly Arg Phe Pro Val Thr Pro Gln Val Pro Leu Arg Pro Met Thr
20 25 30

Tyr Lys